

Amendments to the Claims

In response to the above mentioned Advisor action dated 3-19-2003, this listing of claims replaces all prior versions and listing of claims in the application.

1. (Currently and previously AMENDED) A method of fabrication of a 1T Static Random Access Memory (SRAM), comprising the steps of:

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- a) forming a word line structure and a capacitor plate structure on a substrate;
 - (1) said capacitor plate structure comprised of a capacitor dielectric on said substrate and a conductive plate layer on said capacitor dielectric; said capacitor plate structure overlying a plate region of said substrate; said plate region and said conductive plate layer acting as plates of a capacitor;
 - b) implanting ions of a first conductivity type into said substrate forming a cell node region in said substrate between said word line structure and said capacitor plate structure; and forming a first bit line region in said substrate adjacent to said word line structure;
 - c) forming spacers on the sidewalls of said word line structure and said capacitor plate structure;
 - d) forming a mask pattern over said cell node region;
 - e) implanting ions of a first conductivity type into said substrate to form a second bitline region; and not implanting ions into said cell node region;
 - f) removing the mask pattern;
 - g) forming a dielectric layer over said substrate; and
 - h) forming a bitline contact to said second bitline region to form a 1T Static Random Access Memory.
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2. (ORIGINAL) The method of claim 1 wherein said second bit line region preferably has an impurity concentration greater than the cell node region by at least a factor of 10.

3. (ORIGINAL) The method of claim 1 wherein said substrate is doped with a second conductivity type impurity; second conductivity type impurity is an n-type impurity; said substrate has an impurity concentration between $1E17$ and $1E18$ atoms/cc.
4. (ORIGINAL) The method of claim 1 wherein said substrate is p doped and has a n-well under said word line structure and said capacitor plate structure, said N-well is doped with a second conductivity type impurity; second conductivity type impurity is an n-type impurity; said n-well has an impurity concentration between $1E17$ and $1E18$ atoms/cc.
5. (ORIGINAL) The method of claim 1 wherein said second bitline region has a concentration between $1E20$ and $1E21$ atom/cc.
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word
6. (ORIGINAL) The method of claim 1 wherein said first bit line region has a p-type doping and has an impurity concentration between $1E18$ and $1E19$ Atoms/cc, said second bit line region has a p-type doping and has a impurity concentration between $1E20$ and $1E21$ atoms/cc and said cell node region has a p-type doping and has an impurity concentration between $1E18$ and $1E19$ atom/cc.
7. (ORIGINAL) The method of claim 1 wherein said first bit line region has a p-type doping and has an impurity concentration between $1E18$ and $1E19$ Atoms/cc, said second bit line region has a p-type doping and has a impurity concentration between $1E20$ and $1E21$ atoms/cc and said cell node region has a p-type doping and has an impurity concentration between $1E17$ and $1E18$ atom/cc.
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8. (Currently amended and Previously TWICE AMENDED) A method of fabrication of a 1T Static Random Access Memory (SRAM), comprising the steps of :

- a) forming a dielectric layer on a substrate;
forming a conductive layer on said dielectric layer;
patterning said conductive layer and said dielectric layer to form a word line structure and a capacitor plate structure on a substrate;
- (1) said capacitor plate structure comprised of a capacitor dielectric on said substrate and a conductive plate layer on said capacitor dielectric; said capacitor plate structure overlying a plate region of said substrate; said plate region and said conductive plate layer acting as plates of a capacitor; said capacitor dielectric is comprised of said dielectric layer;
- (2) said substrate is p doped and has a n-well under said word line structure and said capacitor plate structure, said N-well is doped with a second conductivity type impurity; second conductivity type impurity is an n-type impurity; said n-well has an impurity concentration between $1E17$ and $1E18$ atoms/cc;
- b) implanting ions of a first conductivity type into said substrate forming a cell node region in said substrate between said word line structure and said capacitor plate structure; and forming a first bit line region in said substrate adjacent to said word line structure; said cell node region and said first bit line region do not intersect;
- (1) said first bit line region and said cell node region have a p-type doping and have an impurity concentration between $1E18$ and $1E19$ atoms/cc,
- c) forming spacers on the sidewalls of said word line structure and said capacitor plate structure;
- d) forming a mask pattern over said cell node region;
- e) implanting ions of a first conductivity type into said substrate to form a second bitline region; and not implanting ions into said cell node region; said second bitline region has a concentration between $1E20$ and $1E21$ atom/cc;
- f) removing the mask pattern;

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cont.

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- g) forming a dielectric layer over said substrate; and
- h) forming a bitline contact to said second bitline region to form a 1T Static

Random Access Memory.

Previously canceled claims 9-14.

Previously canceled claim 15.

9 ~~16~~. (Currently amended and Previously Added) A method of fabrication of a 1T Static

Random Access Memory (SRAM), comprising the steps of:

- a) forming a dielectric layer on a substrate;
- b) forming a conductive layer on said dielectric layer;
- c) patterning said conductive layer and said dielectric layer to form a word line structure and a capacitor plate structure on a substrate;
- (1) said capacitor plate structure comprised of a capacitor dielectric on said substrate and a conductive plate layer on said capacitor dielectric; said capacitor plate structure overlying a plate region of said substrate; said plate region and said conductive plate layer acting as plates of a capacitor; said capacitor dielectric is comprised of said dielectric layer;
- d) implanting ions of a first conductivity type into said substrate forming a cell node region in said substrate between said word line structure and said capacitor plate structure; and forming a first bit line region in said substrate adjacent to said word line structure, said cell node region and said first bit line region do not intersect;
- e) forming spacers on the sidewalls of said word line structure and said capacitor plate structure;
- f) forming a mask pattern over said cell node region;
- g) implanting ions of a first conductivity type into said substrate to form a second bitline region; and not implanting ions into said cell node region;
- h) removing the mask pattern;
- i) forming a dielectric layer over said substrate; and

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- j) forming a bitline contact to said second bitline region to form a 1T Static
Random Access Memory.

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